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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,198	11/13/2001	Tsuyoshi Sano	U013609-7	9580
140	7590	09/13/2004	EXAMINER	
LADAS & PARRY 26 WEST 61ST STREET NEW YORK, NY 10023			SHOSHO, CALLIE E	
			ART UNIT	PAPER NUMBER

1714

DATE MAILED: 09/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

S.C.

Office Action Summary

Application No.

09/914,198

Applicant(s)

SANO ET AL.

Examiner

Callie E. Shosho

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/14/04, 7/6/04, & 7/29/04.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-17 and 19-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7, 14-17 and 19-22 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 5, 8 and 23-25 is/are rejected.
- 7) ☒ Claim(s) 3 and 9-13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/6/04 & 7/29/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. All outstanding rejections are overcome by applicants' amendment filed 6/14/04.

Given that the applicants' submission of an information disclosure statement on 7/29/04 under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) prompted the new grounds of rejection as set forth below, the following action is final.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 4-5, 8, and 23-25 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 10-315445.

JP 10-315445, a translation of which is included with this office action, discloses ink set comprising light black ink and dark black ink wherein the dark black ink comprises 20 parts carbon black, 0.1 parts blue dispersant, 17.2 parts resin emulsion (31% resin), 5 parts surfactant, 0.1 parts diethylaminoethanol, 1 parts diethylene glycol monobutyl ether, and 56.6 parts water. It is further disclosed that the light black ink comprises all the ingredients of the dark ink plus additionally 7.2 parts resin emulsion (31% resin), 15.7 parts diethylene glycol, and 77.1 parts water which results in light black ink comprising 20 parts carbon black, 0.1 parts blue dispersant, 24.4 parts resin emulsion (31% resin), 5 parts surfactant, 15.7 parts diethylene glycol, 0.1 parts diethylaminoethanol, 1 parts diethylene glycol monobutyl ether, and 133.7 parts water. It is

calculated that the dark ink comprises 20% pigment ($20/100$) and 5.33% resin ($(0.31 \times 17.2)/100$) while the light ink comprises 10% pigment ($20/200$) and 3.78% resin ($(0.31 \times 24.4)/200$). Thus, it is calculated that the ratio of resin to pigment for the dark ink is 0.267 ($5.33/20$) while the ratio of resin to pigment for light ink is 0.378 ($3.78/10$) and the difference between the ratios is 0.111. There is further disclosed ink jet recording method wherein the ink is ejected from printer onto recording medium (claim 4, paragraphs 27, 32, 34, 36-38, and 54-57).

In light of the above, it is clear that JP 10-315445 anticipates the present claims.

Allowable Subject Matter

4. Claims 3 and 9-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 3 and 9-13 would be allowable if rewritten in independent form as described above given that JP 10-315445 discloses ink set comprising dark black ink and light black ink wherein the amount of resin in the dark ink is calculated as 5.33% while the amount of resin in the light ink is calculated as 3.78% and thus, there is no disclosure or suggestion that the amount of resin in the dark ink is less than the amount of resin in the light ink and no disclosure that the dark ink is cyan and/or magenta and the light ink is light cyan and/or light magenta.

5. Claims 7, 14-17, and 19-22 are allowable over the "closest" prior art JP 10-315445 given that JP 10-315445 discloses ink set comprising dark black ink and light black ink wherein the amount of fine polymer particles in the dark ink is calculated as 5.33% while the amount of fine

polymer particles in the light ink is calculated as 3.78% and thus, there is no disclosure or suggestion that the amount of fine polymer particles in the dark ink is less than the amount of resin in the light ink as required in present claim 7. Further, given that JP 10-315445 discloses ink set comprising only dark black ink and light black ink, there is no disclosure or suggestion of ink set comprising at least six different colored inks, i.e. black, cyan, magenta, yellow, light cyan, and light magenta as required in present claims 14-17 and 19-22.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

EP 879857 discloses ink set comprising cationic black ink, anionic black ink, and color inks, however, there is no disclosure that the inks comprises resin emulsion, no disclosure of dark ink and light ink each comprising pigment and fine polymer particles wherein the ratio of fine polymer particles to pigment for the dark ink is lower than the ratio of fine polymer particles to pigment for the light ink, and no disclosure of ink set comprising at least six different colored inks, i.e. black, cyan, magenta, yellow, light cyan, and light magenta, as presently claimed.

7. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 7/29/04 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 609(B)(2)(i). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

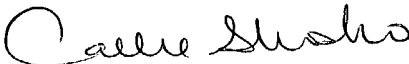
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
9/4/04